

Appl. No. 10/787,485

Attorney Docket No.:N1085-00199[TSMC2003-0402]

Amdt. dated 09/20/2007

N1280-155

Response to Office Action of 07/27/2007

REMARKS/ARGUMENTS

Claims 1, 3-5, 7-10, 12-15 and 17-27 were previously pending in the subject application and each has been rejected. Claims 3, 4, 10 and 15 are amended herein and claim 23 canceled. Applicants respectfully request re-examination, reconsideration and allowance of each of pending claims 1, 3-5, 7-10, 12-15, 17-22, and 24-27.

Applicants point out that independent claim 15 has been amended to now include the features that previously appeared in claim 23, which had depended from claim 15. As such, this combination of features was previously searched by the Examiner and this claim amendment after final should duly be entered. Claims 3, 4 and 10 were amended to correct minor clerical errors.

I. Rejection of Claims 1, 3-5, 7, 9-10, 12, 14-15, 17-21 and 23-27

Claims 1, 3-5, 7, 9-10, 12, 14-15, 17-21 and 23-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Disclosed Prior Art, i.e., specification pages 1-5 and FIGS. 1-3, hereinafter "ADPA," in view of Kimura, et al. (USPN 6,439,822), hereinafter "Kimura." Applicants respectfully submit that these claim rejections are overcome for reasons set forth below.

The Office action concedes, on page 3, that:

ADPA does not disclose a material transfer port to be shared by both the first and second transport subsystems and the elongated opening accommodates both the first material transport subsystem and the second material transport subsystem and has a vertical dimension larger than a sum vertical dimensions of at least two cassettes.

Briefly and in summary, the claimed invention titled "Method for Integrating Interbay and Intrabay Material Transportation Systems Within An Integrated Circuit Factory" is directed to transporting substrate-carrying cassettes throughout a semiconductor manufacturing area, i.e., from bay to bay. Applicants point out that a "bay" in semiconductor manufacturing is well-known to one of ordinary skill of the art as

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describing an area within the manufacturing facility that is divided off and used for a particular purpose. As such, the invention is directed to globally transporting substrate-carrying cassettes throughout a large manufacturing facility. The claimed invention utilizes an overhead rail system that transports materials throughout a large manufacturing area, including to and from a stocker, used to stock and store new or processed material. Kimura, in sharp contrast, provides a single, static apparatus within which multiple processing operations can be carried out. Kimura is not directed to transferring material throughout the factory, but rather only transfers cassettes of wafers from inside to outside of the apparatus and then the cassettes or individual wafers within the apparatus.

Applicants point out that, in each of Independent claims 1, 10 and 15, it is the elongated opening within the sidewall of the material stocker that has a vertical dimension larger than a sum of vertical dimensions of at least two cassettes. It is this opening that accommodates two transport systems that are at different heights. As such, cassettes may be transferred into and out of the stocker through an opening that has a vertical dimension larger than a sum of vertical dimensions of at least two cassettes, i.e., cassettes from respective transport systems at different heights can be transported into/out of the stocker at different heights and through the same elongated vertical opening.

Kimura does not provide this feature, and therefore does not make up for the acknowledged deficiencies of the ADPA.

First of all, Kimura does not provide a stocker at all. Kimura therefore cannot and does not provide a stocker with the claimed vertical opening. Because of the absence of this stocker feature from Kimura, the Examiner makes the general assertion that:

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the port of ADPA to include material transfer port to be shared by both the first and second transport subsystems and the elongated opening accommodates both the first

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material transport subsystem and the second material transport subsystem and has a vertical dimension larger than a sum vertical dimensions of at least two cassettes, as per teachings of Kimura, to improve plant layout. (page 3, last 7 lines)

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The Examiner, however, cannot and does not point to ANY opening through which cassettes are transferred and which has an opening with a vertical dimension larger than the vertical dimensions of two cassettes, i.e., a vertical opening that accommodates cassettes positioned at two different heights, because Kimura does not provide this aspect. (As above, the Examiner cannot point to such an opening in a stocker because Kimura does not provide a stocker).

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Kimura is limited to transferring cassettes into and out of the apparatus at one vertical location. Kimura's Abstract reads: *The substrate carrier transfer section shifts the position of the substrate carrier between a first position at which the substrate carrier is carried to/from the outside* Moreover, in referring to FIG. 19 that was pointed out by the Examiner, and also FIG. 16 which is associated with FIG. 19, it is clear that linear drive motor L1 translates a cassette carrier C only when substrate carrier C is in the vertical position occupied by substrate carrier C2 in FIG. 19. This lateral translation is indicated by the horizontal, two-headed arrow. While one could speculate that OHT and AGV systems *might* transfer substrate carriers throughout the production area at different heights, the arrows in FIG. 19 indicate that, regardless of the global transport system used, the transport system must deliver the substrate carrier C to one vertical position on holding member 1140 set on substrate carrier mounting section 1120, of Kimura's apparatus from which the substrate carrier is transferred into the apparatus. Once transferred inside, the substrate carrier C may be moved in various positions, but the Examiner does not point out and Kimura does not provide, any vertical opening that accommodates a substrate carrier, e.g., cassette, that can be transferred through the opening at different heights or any vertical opening that has a vertical dimension larger than a sum of vertical dimensions of at least two cassettes.

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Kimura therefore does not make up for the deficiencies of the ADPA and therefore independent claims 1, 10 and 15 and their dependent claims are distinguished from the ADPA in view of Kimura.

With claim 23 canceled, the rejection of claims 1, 3-5, 7, 9-10, 12, 14-15, 17-21 and 24-27 under 35 U.S.C. § 103(a), should be withdrawn.

II. **Rejection of Claims 8, 13 and 22**

Claims 8, 13 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over ADPA in view of Kimura and Bonora, et al. (US 6,468,021), hereinafter "Bonora." Applicants respectfully submit that these claim rejections are overcome for reasons set forth below.

Claims 8, 13 and 22 depend, respectively, from independent claims 1, 10 and 15, which are distinguished from the ADPA in view of Kimura as above. Bonora has apparently been relied upon for providing a ceiling height of 3-5 meters. Bonora therefore does not make up for the above-stated deficiencies of the ADPA plus Kimura. As such, independent claims 1, 10 and 15 are distinguished from the ADPA in view of Kimura and Bonora, as are claims 8, 13 and 22 by virtue of their respective dependencies.

The rejection of claims 8, 13 and 22 should therefore be withdrawn.

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CONCLUSION


Based on the foregoing, each of pending claims 1, 3-5, 7, 9-10, 12, 14-15, 17-21 and 24-27 is in allowable form and the application in condition for allowance, which action is respectfully and expeditiously requested.

5 The Assistant Commissioner for Patents is hereby authorized to charge any fees necessary to give effect to this filing and to credit any excess payment that may be associated with this communication, to Deposit Account 04-1679.

Respectfully submitted,

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